

Amendments to the Claims:

1. (Currently Amended) A system ~~for downloading pushed content~~ comprising:
a terminal comprising a processor configured to receive service loading content that identifies download content and has a digital signature, wherein the processor is configured to authenticate the service loading content based upon the digital signature, and ~~if~~ when the service loading content is authenticated, pull the download content to the terminal, wherein the processor is configured to authenticate the service loading content, and pull the download content, in response to receiving the service loading content and independent of interaction from a user of the terminal, and

wherein the processor is configured to determine ~~if~~ when an interruption occurs in pulling the download content such that the terminal receives a portion but less than all of the download content, and ~~if~~ when an interruption occurs in receiving the content, recover the download content including receiving a remaining portion of the download content without also receiving at least part of the previously received portion.

2. (Previously Presented) The system according to Claim 1, wherein the processor of the terminal is configured to verify the digital signature with a public key to thereby authenticate the service loading content.

3. (Previously Presented) The system according to Claim 2 further comprising:
a push initiator configured to digitally sign the service loading content with a private key associated with the public key, and thereafter transmit the service loading content to the terminal.

4. (Previously Presented) The system according to Claim 1 further comprising:
an origin server associated with the download content, wherein the service loading content identifies the origin server associated with the download content,
wherein the processor of the terminal is configured to send a request for the download content to the origin server when the service loading content is authenticated, and wherein the

processor is configured to receive the download content from the origin server in response to the request.

5. (Previously Presented) The system according to Claim 4, wherein the processor of the terminal is configured to operate a download agent, wherein the download agent is configured to receive a download descriptor, and thereafter receive the download content.

6. (Currently Amended) The system according to Claim 5, wherein the download content comprises a plurality of data packets, and wherein the download agent is configured to determine ~~if~~when an interruption occurs in receiving the plurality of data packets such that the download agent receives less than the plurality of data packets of the download content, and ~~if~~when an interruption occurs in receiving the plurality of data packets, recover the download content such that the download agent receives the plurality of data packets.

7. (Previously Presented) The system according to Claim 6, wherein the download agent is further configured to determine at least one remaining data packet to be received by the download agent to thereby complete reception of the plurality of data packets of the download content, instruct the origin server to send the at least one remaining data packet, and receive the at least one remaining data packet such that the download agent receives the plurality of data packets.

8. (Previously Presented) The system according to Claim 4, wherein the download content comprises a plurality of data packets, and wherein the processor of the terminal is configured to operate a download agent configured to receive the plurality of data packets and receive at least one information packet regarding at least one group of at least one data packet.

9. (Currently Amended) The system according to Claim 8, wherein the download agent is configured to monitor the received data packets to determine, based upon at least one information packet, ~~if~~when an interruption occurs in receiving the plurality of data packets such

that the download agent receives less than the plurality of data packets of the download content, and wherein the download agent is configured to recover the download content such that the download agent receives the plurality of data packets ~~if~~ when an interruption occurs in receiving the plurality of data packets.

10. (Currently Amended) A method ~~for downloading pushed content to a terminal,~~
~~the method comprising:~~

receiving service loading content at a terminal, wherein the service loading content identifies download content and has a digital signature;

authenticating the service loading content based upon the digital signature; and

pulling the download content to the terminal when the service loading content is authenticated, wherein the service loading content is authenticated, and the download content is pulled, in response to receiving the service loading content and independent of interaction from a user of the terminal,

wherein pulling the download content includes determining ~~if~~ when an interruption occurs in pulling the download content such that the terminal receives a portion but less than all of the content, and ~~if~~ when an interruption occurs in receiving the content, recovering the download content including receiving a remaining portion of the download content without also receiving at least part of the previously received portion.

11. (Previously Presented) The method according to Claim 10, wherein authenticating the service loading content comprises verifying the digital signature with a public key.

12. (Currently Amended) The method according to Claim 11 ~~further comprising:~~,
wherein receiving service loading content comprises receiving digitally-signed service loading content, the service loading content having been digitally signing the service loading content signed with a private key associated with the public key; and
~~transmitting the service loading content to the terminal.~~

13. (Previously Presented) The method according to Claim 10, wherein the service loading content identifies an origin server associated with the download content, and wherein pulling the download content comprises:

sending a request for the download content to the origin server when the service loading content is authenticated; and

receiving the download content at the terminal from the origin server in response to the request.

14. (Previously Presented) The method according to Claim 13, wherein receiving the download content comprises receiving a download descriptor, and thereafter receiving the download content.

15. (Currently Amended) The method according to Claim 14, wherein the download content comprises a plurality of data packets, wherein determining ~~if~~ when an interruption occurs comprises determining ~~if~~ when an interruption occurs in receiving the plurality of data packets such that the terminal receives less than the plurality of data packets of the download content, and wherein recovering the download content comprises recovering the download content such that the terminal receives the plurality of data packets.

16. (Previously Presented) The method according to Claim 15, wherein recovering the download content comprises:

determining at least one remaining data packet to be received at the terminal to thereby complete reception of the plurality of data packets of the download content;

instructing the origin server to send the at least one remaining data packet; and

receiving the at least one remaining data packet such that the terminal receives the plurality of data packets.

17. (Previously Presented) The method according to Claim 13, wherein the download

content comprises a plurality of data packets, and wherein receiving the download content comprises receiving the plurality of data packets and receiving at least one information packet regarding at least one group of at least one data packet.

18. (Currently Amended) The method according to Claim 17, wherein receiving the plurality of data packets further comprises:

monitoring the received data packets to determine, based upon at least one information packet, if-when an interruption occurs in receiving the plurality of data packets such that the terminal receives less than the plurality of data packets of the download content; and if-when an interruption occurs in receiving the plurality of data packets,

recovering the download content such that the terminal receives the plurality of data packets.

19. (Currently Amended) A computer program product ~~for downloading pushed content to a terminal, the computer program product comprising at least one computer-readable storage medium having computer-readable program code portions stored therein, the computer-readable program code portions comprising~~ that in response to execution by a processor cause an apparatus to at least perform the following:

~~a first executable portion configured to receive~~ receiving service loading content at a terminal, wherein the service loading content identifies download content and has a digital signature;

~~a second executable portion configured to authenticate~~ authenticating the service loading content based upon the digital signature; and

~~a third executable portion configured to pull~~ pulling the download content ~~to the terminal~~ when the service loading content is authenticated,

wherein ~~the second executable portion is configured to authenticate~~ the service loading content is authenticated, and ~~the third executable portion is configured to pull~~ the download content is pulled, in response to receiving the service loading content and independent of interaction from a user of the ~~terminal~~ apparatus,

wherein the ~~third-executable portion is also configured to determine if pulling the~~
download content includes determining when an interruption occurs in pulling the download
content such that the ~~terminal-apparatus~~ receives a portion but less than all of the content, and if
when an interruption occurs in receiving the content, ~~recover~~recovering the download content
including receiving a remaining portion of the download content without also receiving at least
part of the previously received portion.

20. (Currently Amended) The computer program product according to Claim 19,
wherein the ~~second-executable portion is configured to verify authenticating the service loading~~
content comprises verifying the digital signature with a public key to thereby to authenticate the
service loading content.

21. (Currently Amended) The computer program product according to Claim 20
~~further comprising: a fourth-executable portion configured to, wherein receiving service loading~~
content comprises receiving digitally-signed service loading content, the service loading content
having been digitally sign the service loading content signed with a private key associated with
the public key; and

~~a fifth-executable portion configured to transmit the service loading content to the~~
terminal.

22. (Currently Amended) The computer program product according to Claim 19,
wherein the service loading content identifies an origin server associated with the download
content, and wherein the ~~third-executable portion is configured to send pulling the download~~
content comprises:

sending a request for the download content to the origin server when the service loading
content is authenticated, ~~and thereafter receive;~~ and

receiving the download content at the ~~terminal-apparatus~~ from the origin server in
response to the request.

23. (Currently Amended) The computer program product according to Claim 22, wherein the ~~third executable portion is configured to receive~~ receiving the download content comprises receiving a download descriptor, and thereafter receive receiving the download content.

24. (Currently Amended) The computer program product according to Claim 23, wherein the download content comprises a plurality of data packets, and wherein the ~~third executable portion is further configured to determine if~~ determining when an interruption occurs comprises determining when an interruption occurs in receiving the plurality of data packets such that the ~~terminal apparatus~~ receives less than the plurality of data packets of the download content, and if an interruption occurs in receiving the plurality of data packets, ~~recover wherein recovering the download content comprises recovering~~ the download content such that the ~~terminal apparatus~~ receives the plurality of data packets.

25. (Currently Amended) The computer program product according to Claim 24, wherein the ~~third executable portion is configured to recover~~ recovering the download content by comprises:

determining at least one remaining data packet to be received at the ~~terminal apparatus~~ to thereby complete reception of the plurality of data packets of the download content, ~~instruct;~~
instructing the origin server to send the at least one remaining data packet, ~~and receive;~~
and
receiving the at least one remaining data packet such that the ~~terminal apparatus~~ receives the plurality of data packets.

26. (Currently Amended) The computer program product according to Claim 22, wherein the download content comprises a plurality of data packets, and wherein the ~~third executable portion is configured to receive~~ receiving the download content comprises receiving the plurality of data packets and ~~receive~~ receiving at least one information packet regarding at least one group of at least one data packet.

27. (Currently Amended) The computer program product according to Claim 26, wherein the ~~third executable portion is further configured to monitor~~ receiving the plurality of data packets further comprises:

monitoring the received data packets to determine, based upon at least one information packet, ~~if~~ when an interruption occurs in receiving the plurality of data packets such that the ~~terminal apparatus~~ receives less than the plurality of data packets of the download content, ~~and wherein the third executable portion is configured to recover;~~ and when an interruption occurs in receiving the plurality of data packets,

recovering the download content such that the ~~terminal apparatus~~ receives the plurality of data packets ~~if an interruption occurs in receiving the plurality of data packets.~~

28. (Currently Amended) An apparatus comprising a processor and a memory storing executable instructions that in response to execution by the processor cause the apparatus to at least perform the following:

~~a processor configured to receive~~ receiving service loading content, wherein the service loading content identifies download content and has a digital signature,;

~~wherein the processor is configured to authenticate~~ authenticating the service loading content based upon the digital signature,; and

~~wherein the processor is configured to pull~~ pulling the download content when the service loading content is authenticated, wherein the processor is configured to ~~authenticate the service loading content is authenticated,~~ and ~~pull~~ the download content is pulled, in response to receiving the service loading content and independent of interaction from a user of the apparatus,

~~wherein the processor being configured to pull~~ pulling the download content includes ~~being configured to determine if~~ determining when an interruption occurs in pulling the download content such that the apparatus receives a portion but less than all of the content, and ~~if~~ when an interruption occurs in receiving the content, ~~recover~~ recovering the download content including receiving a remaining portion of the download content without also receiving at least part of the previously received portion.

29. (Currently Amended) The apparatus according to Claim 28, wherein the ~~processor being configured to authenticate~~ authenticating the service loading content includes ~~being configured to verify~~ comprises verifying the digital signature with a public key.

30. (Currently Amended) The apparatus according to Claim 29, wherein the ~~processor being configured to receive~~ receiving service loading content includes ~~being configured to receive~~ comprises receiving digitally-signed service loading content, the service loading content having been digitally signed with a private key associated with the public key.

31. (Currently Amended) The apparatus according to Claim 28, wherein the service loading content identifies an origin server associated with the download content, and wherein the ~~processor being configured to pull~~ pulling the download content includes ~~being configured to~~ comprises:

~~send~~ sending a request for the download content to the origin server when the service loading content is authenticated; and

~~receive~~ receiving the download content at the apparatus from the origin server in response to the request.

32. (Currently Amended) The apparatus according to Claim 31, wherein the ~~processor being configured to receive~~ receiving the download content includes ~~being configured to receive~~ comprises receiving a download descriptor, and thereafter ~~receive~~ receiving the download content.

33. (Currently Amended) The apparatus according to Claim 32, wherein the download content comprises a plurality of data packets, wherein the ~~processor being configured to determine if~~ determining when an interruption occurs includes ~~being configured to determine if~~ comprises determining when an interruption occurs in receiving the plurality of data packets such that the apparatus receives less than the plurality of data packets of the download content,

and wherein the processor being configured to ~~recover~~ recovering the download content includes being configured to ~~recover~~ comprises recovering the download content such that the apparatus receives the plurality of data packets.

34. (Currently Amended) The apparatus according to Claim 33, wherein the processor being configured to ~~recover~~ recovering the download content includes being configured to comprises:

~~determine~~ determining at least one remaining data packet to be received at the apparatus to thereby complete reception of the plurality of data packets of the download content;
~~instruct~~ instructing the origin server to send the at least one remaining data packet; and
~~receive~~ receiving the at least one remaining data packet such that the apparatus receives the plurality of data packets.

35. (Currently Amended) The apparatus according to Claim 31, wherein the download content comprises a plurality of data packets, and wherein the processor being configured to ~~receive~~ receiving the download content includes being configured to ~~receive~~ comprises receiving the plurality of data packets and ~~receive~~ receiving at least one information packet regarding at least one group of at least one data packet.

36. (Currently Amended) The apparatus according to Claim 35, wherein the processor being configured to ~~receive~~ receiving the plurality of data packets further includes being configured to comprises:

~~monitor~~ monitoring the received data packets to determine, based upon at least one information packet, ~~if~~ when an interruption occurs in receiving the plurality of data packets such that the apparatus receives less than the plurality of data packets of the download content; and ~~if~~ when an interruption occurs in receiving the plurality of data packets,
~~recover~~ recovering the download content such that the apparatus receives the plurality of data packets.